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10/710,337	07/01/2004	Joseph Araujo	CCT-P0001	4336

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EXAMINER	
PERREIRA, MELISSA JEAN	
ART UNIT	PAPER NUMBER
1618	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/710,337	ARAUJO ET AL.	
	Examiner	Art Unit	
	MELISSA PERREIRA	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 37-63 were newly added in the amendment filed 11/17/08 and are pending in the application. Claims 1-36 were canceled in the amendment filed 11/17/08. Any objections and/or rejections from previous office actions that have not been reiterated in this office action are obviated.

Specification

1. The amendments to the specification and drawings are acknowledged and accepted.

New Grounds of Rejection Necessitated by the Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 42-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laska et al. (*Learn Mem*. **1998**, *5*, 193-203) in view of Frank et al. (*Bulletin of the Psychonomic Society* **1989**, *27*, 455-458) and Griffin et al. (*Neuroscience and Behavioral Reviews* **1984**, *8*, 253-259) and in further view of Tapp et al. (*Learn Mem.* **2003**, *10*, 64-73).

3. Laska et al. (*Learn Mem*. **1998**, *5*, 193-203) discloses the method of determining the preference of a food by reliably learning to avoid the unpalatable food items within 10 trials (repeating the steps at least three times) (abstract). The conditioned avoidance learning paradigm utilized squirrel monkeys and marmosets to reliably form associations between visual or olfactory cues of a potential food and its palatability and to remember the associations over prolonged periods of time (abstract). To familiarize the animals with the procedure and to control for spontaneous positions preference of individual animals in taking cookies, the experiment was preceded by a 7-day familiarization phase in which the monkeys were presented daily with one pair of identical, unstained, and nonodorized round cookies that both were palatable.

4. In regards to the stimulus preference test of the instant claims.

5. Laska et al. discloses that Experiment 1 was conducted to asses the ability of squirrel monkeys and common marmosets to reliably form associations between visual or olfactory cues of a potential food, **in the absence** of gustatory cues, and its palatability (p195, experiment 1; p198, experiment 2, p198, materials and methods). Also, testing for color as the discriminative stimulus where round cookies were stained red or yellow using odorless and tasteless commercial food dyes. For testing odor as the discriminative stimulus, round and unstained cookies were odorized by adding commercial baking aroma to the dough. For testing shape as the discriminative stimulus, unstained cookies without baking aromas were cut out round or triangle shaped (p195, paragraph 1 and p195-196, materials and methods).

6. In regards to the discrimination learning procedure of the instant claims.

7. Three animals of each species were assigned to one combination of cue and USC (e.g. red cookie palatable and yellow cookie unpalatable) and the other three to the alternative combination (e.g. yellow cookie palatable and red cookie unpalatable). Pairs of cookies were presented per animal per day (p195, procedures). On 10 consecutive days, the animals were then presented with one pair of cookies that only differed in color and patentability, and their choice was recorded. Only when these 10 presentations were completed was the next series using differently shaped cookies started, which was finally followed by the third series of tests using differently odorized cookies (p196, paragraph 2). The animal's behavioral reactions toward both the palatable and unpalatable food items were unequivocal and identical to those shown in response to the differently shaped cookies that were neither stained nor odorized (p195, paragraph 2). In assessing performance, correct choices consisted in the animals taking the palatable cookie as the first one into their mouths (p195, data analysis). The results show that the animals reliably form associations between visual or olfactory cues of a potential food, in the absence of gustatory cues, and its palatability. The animals also retain these associations in memory and to make use of them in new encounters with the same stimuli (p198, experiment 2) and remember the significance of the visual cues color and shape (p199, general discussion).

8. Laska et al. does not disclose a set of at least three distinctive stimulus objects to a companion animal and that the food may be a veterinary biologic. Laska et al. also does not disclose using a reversal learning procedure.

9. Frank et al. (*Bulletin of the Psychonomic Society* **1989**, *27*, 455-458) discloses the visual discrimination learning procedure which was carried out for 2 weeks or until the subject reached criterion. A stimulus tray was withdrawn behind a screen, food was placed in one of the three wells, and the well covered by a block of the same color to which the subject had been shaped. The empty wells were covered by blocks of the opposite color and the tray presented to the subject (p456; habituation and shaping; p456, initial discrimination). Thus three stimuli were used for the discrimination learning procedure. Frank et al. also discloses a reversal learning procedure where the performance task was reversed. The pups that had initially been rewarded for displacing the white block, food was placed under a black block and the two empty wells were covered with white blocks. Pups that had initially learned to displace the black block were presented two black blocks and one white block (p456, reversal learning).

10. Griffin et al. (*Neuroscience and Behavioral Reviews* **1984**, *8*, 253-259) discloses methods to determine food preference (dog food, veterinary biologic) of dogs where six commercially available dog foods were used in three different types of preference tests (abstract; p254, foods; p258, general discussion).

11. Tapp et al. (*Learn Mem.* **2003**, *10*, 64-73) discloses a discrimination learning procedure for the method of size and learning behavior in aging dogs. The method of discrimination learning involves using a food reward with a preferred stimulus and a non-preferred stimulus. The stimulus most frequently selected by the animal was deemed the preferred object. The dogs learn to displace a preferred stimulus when displacement of a non-preferred stimulus results in a food reward. The discrimination

reversal learning procedure involved rewarding the dogs with food when the preferred stimulus was chosen while displacement of a non-preferred stimulus results in no food reward (p70, column 2). The responses to the stimuli and the choices of the dogs was recorded and analyzed for each trial (p71, paragraphs 2-5) and the dogs received 10 daily trials, 7 days per week.

12. At the time of the invention it would have been obvious to one ordinarily skilled in the art to utilize multiple stimuli in the discrimination learning procedure of Laska et al. as Frank et al. teaches of the use of three blocks (stimuli) in a discrimination learning procedure. Laska et al. teaches that the stimuli are different based on color, shape, etc. and therefore it would be obvious/predictable to use three differently colored or shaped stimuli for the discrimination procedure.

13. At the time of the invention it would have been obvious to one ordinarily skilled in the art that the food used for the method of determining the preference of a food of Laska et al. may be a dog food/veterinary biologic as Griffin et al. teaches that such foods are used in methods to determine food preference. Thus the substitution of the foods of Laska et al. for the dog food/veterinary biologic is obvious or predictable as the color of the dog food/veterinary biologic may be manipulated via food coloring.

14. At the time of the invention it would have been obvious to one ordinarily skilled in the art to utilize the discrimination reversal learning procedure of Tapp et al. or Frank et al. for the method of determining the preference of a food as disclosed by Laska et al. It is obvious since performance monitoring is a critical executive function and reversal learning tasks predominantly rely on executive functions. Discrimination reversals

require subjects to inhibit prepotent responses to previously correct stimuli and to shift responses to a new stimulus-reward contingency within the same perceptual dimension [Tapp et al. (Learn Mem. **2003**, *10*, 64-73, see p64, paragraph 2)]. The discrimination reversals stimulus-reward trials allows for a true result in regards to the effects of palatability on the choice of the reward regardless of the stimulus (i.e. preferred or non-preferred).

15. Claims 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laska et al. (*Learn Mem*. **1998**, *5*, 193-203) in view of Frank et al. (*Bulletin of the Psychonomic Society* **1989**, *27*, 455-458) and Griffin et al. (*Neuroscience and Behavioral Reviews* **1984**, *8*, 253-259).

16. Laska et al. (*Learn Mem*. **1998**, *5*, 193-203) discloses the method for determining a stimulus preference where in Experiment 1 the ability of squirrel monkeys and common marmosets to reliably form associations between a visual stimulus or olfactory stimulus and of a potential food, in the absence of gustatory cues, and its palatability is examined (p195, experiment 1; p198, experiment 2, p198, materials and methods). Also, Laska et al. discloses testing for color as the discriminative stimulus where round cookies were stained red or yellow using odorless and tasteless commercial food dyes. For testing odor as the discriminative stimulus, round and unstained cookies were odorized by adding commercial baking aroma to the dough. For testing shape as the discriminative stimulus, unstained cookies without baking aromas were cut out round or triangle shaped (p195, paragraph 1 and p195-196, materials and methods).

17. Laska et al. does not disclose a set of at least three distinctive stimulus objects to a companion animal and that the food may be a veterinary biologic.

18. Frank et al. (*Bulletin of the Psychonomic Society* **1989**, *27*, 455-458) discloses the stimulus preference test which was carried out for 2 weeks or until the subject reached criterion. A stimulus tray was withdrawn behind a screen, food was placed in one of the three wells , and the well covered by a block of the same color to which the subject had been shaped as well as that stated above.

19. Griffin et al. (*Neuroscience and Behavioral Reviews* **1984**, *8*, 253-259) discloses methods to determine food preference (dog food, veterinary biologic) of dogs where six commercially available dog foods were used in three different types of preference tests (abstract; p254, foods; p258, general discussion).

20. At the time of the invention it would have been obvious to one ordinarily skilled in the art to utilize multiple stimuli in the stimulus preference test of Laska et al. as Frank et al. teaches of the use of three blocks (stimuli) in a stimulus preference test. Laska et al. teaches that the stimuli are different based on color, shape, etc. and therefore it would be obvious/predictable to use three differently colored or shaped stimuli for the stimulus preference test.

21. At the time of the invention it would have been obvious to one ordinarily skilled in the art that the food used for the stimulus preference test of Laska et al. may be a dog food/veterinary biologic as Griffin et al. teaches that such foods are used in methods to determine food preference. Thus the substitution of the foods of Laska et al. for the dog

food/veterinary biologic is obvious or predictable as the color of the dog food/veterinary biologic may be manipulated via food coloring.

22. It would be predictable to substitute one stimulus for any other known stimuli as it is obvious to those skilled in the art to make known substitutions that are similar in function to observe the effects and to use the observations/data generate the desired effect.

Response to Arguments

23. Applicant's arguments filed 11/17/08 have been fully considered but they are not persuasive.

24. Applicant asserts that Laska does not disclose an "identical reward" as the cookies are not identical. Laska discloses that for "the palatable cookies, 15 grams of sugar was added to the dough, and for the unpalatable cookies, 5 grams of quinine hydrochloride and 10 grams of ascorbic acid were added." Laska specifically discloses that "the combination of quinine hydrochloride and ascorbic acid reliably evoked aversive reactions." Laska, p. 194, col. 2, paragraph 3. Respectfully, a cookie using sugar is not an "identical reward" to a cookie that "reliably evoked aversive reactions."

25. Laska et al. does teach of an identical reward as Experiment 1 was conducted to asses the ability of squirrel monkeys and common marmosets to reliably form associations between visual or olfactory cues of a potential food, **in the absence of** gustatory cues, and its palatability (p195, experiment 1; p198, experiment 2, p198,

materials and methods). Therefore the cookies/food reward are identical as the palatability is not a factor.

26. Applicant asserts that Laska does not contemplate claim 37 element 2 "permitting said companion animal to select one distinctive stimulus from said set of at least three distinctive stimuli." Laska discloses presenting cookies, i.e., the food reward, directly to the animals. Laska, p. 195, col. 1, paragraph 4. Applicant, on the other hands permits a companion animal to "select one distinctive stimulus" in which an identical food reward is presented "after selecting one said distinctive stimulus from said set of at least three distinctive stimuli."

27. Laska et al. does teach of an animal selecting one distinctive stimulus as the cookies/food rewards have different colors or different shapes (stimuli). The cookies/food rewards are displayed before the animals but the animals do physically select from the two cookies/food rewards based on color, shape, etc. (i.e. stimuli). The reference of Frank et al. was used to teach of the use of three stimuli for a discrimination learning procedure and/or stimulus preference test. At the time of the invention it would have been obvious to one ordinarily skilled in the art to utilize multiple stimuli in the discrimination learning procedure and/or stimulus preference test of Laska et al. as Frank et al. teaches of the use of three blocks (stimuli) in a discrimination learning procedure and/or stimulus preference test.

28. Applicant asserts that Tapp does not contemplate claim 37, element 1 "presenting a set of at least three distinctive stimuli to a companion animal wherein each of said set of at least three distinctive stimuli is associated with an identical food

reward." Tapp discloses a method for presenting food in two lateral wells in which a "lateral well was unbaited." Tapp, p 70, col. 2, paragraph 3.

29. The reference of Tapp et al. was not used to teach of a set of at least three distinctive stimuli but used to teach of a discrimination learning procedure and a reversal learning procedure since discrimination reversals stimulus-reward trials allows for a true result in regards to the effects of palatability on the choice of the reward regardless of the stimulus (i.e. preferred or non-preferred).

Conclusion

30. No claims are allowed at this time.

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA PERREIRA whose telephone number is (571)272-1354. The examiner can normally be reached on 9am-5pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on 571-272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael G. Hartley/
Supervisory Patent Examiner, Art Unit 1618

/Melissa Perreira/
Examiner, Art Unit 1618